Correspondence

Quantitative audit of the content of histopathology reports

Drs Campbell and Griffiths give an account of how histopathology reports can be produced at a uniformly high standard that is a tribute to the working practice in their department.[1] In laboratories in which computer systems permit the use of "canned text", the initiative could be extended and consolidated by the provision of template reports with variable sections which can be deleted.

To take the example used to illustrate Campbell and Griffiths' paper, a template as a starting point for the reporting of a bladder biopsy specimen containing invasive transitional cell carcinoma might be as follows:

Clinical history
*

Macroscopical
This specimen consists of solid / friable fragments of grey tissue measuring up to *mm and totalling *ml, *mg.

Microscopical
These are fragments of a well / moderately / poorly differentiated, transitional cell carcinoma of bladder showing a solid / papillary / inverted growth pattern. There is evidence of invasion of the submucosa / and muscle coat in * our of * fragments.

There is no adjacent flat urothelium present. / The adjacent flat urothelium present shows in situ malignant / dysplastic change which increases the risk of recurrence or further tumours.

Invasive transitional cell carcinoma of bladder
(grade 1 / 2 / 3, stage 1b / 2 at least)

SNOMED CODES
T74000 URINARY BLADDER
M81203 CARCINOMA, TRANSITIONAL CELL

The content of the template report is that agreed as the minimum for the specimen type and would be based on the guidelines described by Campbell and Griffiths. Asterisks and slashes are used to indicate where a mandatory addition or deletion should be made. Clearly the pathologist must have the option of adding to or deleting from the template. He or she will, however, be confident that they have not omitted an important part of the report.

We have used this approach for nearly three years; a directory of over 4000 standard reports covering much of general histopathology and cytology has been developed. These are recalled using intuitive file names (such as "BLTCC" for the above report) or text indexing and retrieval software. As we can generate appropriate and complete reports bearing accurate SNOMED codes without the delay of an office transcription stage, the mean reporting time has been reduced from 3.95 days to 2.63 days (based on audit of 600 case-mix matched specimens). The quality of our reports has been enhanced. Because the diagnostic criteria for rarer diagnoses are included in the template, there is also the potential for greater diagnostic accuracy, as the pathologists has to read and agree to these criteria when he or she edits the template. Our coverage of some diagnostic areas is relatively comprehensive. Therefore, the use of standard histopathological terms or an immunohistochemical profile as key words to search the directory will select the report giving the correct diagnosis or a series of reports representing a differential diagnosis. We therefore have the beginnings of a "textpert" system.

Pathologists who believe that every report must be individually hand crafted without such aids or who never intend to use a computer will not take to this idea. However, those who cooperate to standardise their service, like Drs Campbell and Griffiths and their colleagues, might like to consider how "canned text" could be used to improve or at least standardise histopathology and cytology reports. Clearly the work required to develop such tools need not be duplicated in every laboratory. Pathologists who consider themselves to have a special interest in any sector of diagnostic histopathology or cytology and who would like to contribute to our report template project are invited to contact the author.

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1 Campbell F, Griffiths DFR. Quantitative audit of the content of histopathology reports. *J Clin Pathol* 1994;47:360–1.

Estimation of haemoglobin concentrations using spectrophotometric tests

Dr Goodrick and colleagues recently reported a patient with a monomeric IgM paraprotein whose haemoglobin estimations were spuriously raised. This was apparently due to interference with the spectrophotometric analytical method by the formation of an optically dense precipitate of plasma and the Coulter lysing agent.[1] A smiliar mechanism has been shown in some of the occasional reports of pseudohyperphosphataemia in patients with monoclonal gammopathies, including Waldenström's macroglobulinaemia.[2] Lipaemia is also recognised to confound the estimation of phosphate by spectrophotometric techniques,[3] as happens with haemoglobin.

Tokmakjian and colleagues reported a patient with an IgM κ monoclonal gammopathy with spurious hypoglycaemia and hypophosphataemia.[4] These phenomena were eventually shown to be due to excessive sample blankings in the automated chemical analyser due to precipitation of IgM monoclonal protein in distilled water which was used as the serum diluent.

Instrument printouts also showed an haemolysis "flag" despite the absence of visible haemolysis or turbidity. In the same way that this patient's spurious hypophosphataemia resulted from a reversal of the mechanism underlying most cases of pseudohyperphosphataemia,[2] so the spurious haemolysis was probably the converse of the phenomenon described by Goodrick and colleagues.

These findings suggest that particular care should be exercised when assessing any laboratory variable estimated by spectrophotometric tests in patients with monoclonal gammopathies. Lai and colleagues, for instance, found unsuspected pseudohyperphosphataemia in 11 of 41 patients with multiple myloma.[5] Without the clinical acumen shown by Goodrick and colleagues, many similar but less pronounced examples of these phenomena might have been inadvertently overlooked.

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1 Goodrick MJ, Boon RJ, Bishop RJD, Coplestone JA, Prentice AG. Inaccurate haemoglobin estimation in Waldenström's macroglobulinaemia: unusual reaction with monomeric IgM paraprotein. *J Clin Pathol* 1993;46:1138–9.
2 Larner AJ. Pseudohyperphosphataemia and monoclonal gammopathy. *Br J Clin Pract* (in press).
3 Leehey DJ, Daugirdas JT, Ing TS, Reid RW. Spurious hyperphosphatemia due to hyperlipidemia. *Arch Intern Med* 1985;145:743–4.
4 Tokmakjian S, Moses G, Haines M. Excessive sample blankings in two analyzers generate reports of apparent hypoglycemia and hypophosphatemia in patients with macroglobulinemia. *Clin Chem* 1990;36:1261–2.
5 Lai LC, McClure D, Cornell C. Pseudohyperphosphataemia in multiple myeloma. *Ann Clin Biochem* 1992;29:237.

Capnocytophaga canimorsus in peripheral blood smears

Fife *et al* suggest that the initial morphology and staining characteristics of organisms seen in the peripheral blood film of septicaemic patients may be useful for provisional identification and also in the choice of initial treatment.[1] The following two points are relevant to the discussion.

Firstly, the possibility of microbial contamination of staining reagents, slide or full blood count container, must be borne in mind. And where findings would be considered unusual in the particular clinical setting, due caution in interpretation should be observed.

Secondly, the authors did not mention *Capnocytophaga canimorsus* (dysgonic fermenter type 2) septicaemia, in which Gram staining of peripheral blood is of confirmed worth. *C canimorsus* septicaemia is particularly associated with patients whose spleens have been removed, following animal bites

or contact. Typical slender, tapering Gram negative bacilli have been reported in buffy coat preparations of 12 of 13 such cases in which staining was attempted.[2] In two cases of overwhelming *C canimorsus* septicaemia whole blood smears were reported positive.[3 4]

A further case, in a 36 year old man without a spleen, presented 36 hours after a trivial dog bite, with purpura fulminans and disseminated intracellular coagulation. The history of dog bite, asplenia, and Gram negative intracellular rods present in the whole blood smear immediately suggested the diagnosis and led to a change from the initial empirical antimicrobial treatment for Gram negative septicaemia with a successful outcome.

Gram negative septicaemias generally respond to aminoglycoside treatment, but *C canimorsus* infections do not. The antimicrobial agents of choice for such infections are penicillin or ciprofloxacin.

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1 Fife A, Hill D, Barton C, Burden P. Gram negative septicaemia diagnosed on peripheral blood smear appearances. *J Clin Pathol* 1994;47:82–4.
2 Kullberg B-J, Westendorp RGJ, Van Wout JW, Meinders AE. Purpura fulminans and symmetrical gangrene caused by capnocytophaga canimorsus (formerly DF- 2) septicaemia—A complication of dog bite. *Medicine* 1991;70:287–92.
3 Ndon JA. Capnocytophaga canimorsus septicaemia caused by a dog bite in a hairy cell leukaemia patient. *J Clin Microbiol* 1992;30: 211–3.
4 Holmes RL, Kozinn WP. DF-2 septicaemia following whirlpool spa immersion. *J Clin Microbiol* 1986;23:627–8.

Book reviews

If you wish to order, or require further information regarding the titles reviewed here, please write or telephone the BMJ Bookshop, PO Box 295, London WC1H 9TE. Tel: 071 383 6244. Fax: 071 383 6662. Books are supplied post free in the UK and for British Forces Posted Overseas addresses. Overseas customers should add 15% for postage and packing. Payment can be made by cheque in sterling drawn on a UK bank, or by credit card (MasterCard, VISA, or American Express) stating card number, expiry date, and your full name.
(The price and availability are occasionally subject to revision by the Publishers.)

Pathology of the Appendix. RA Williams, P Myers. (Pp 180; £49·50.) Chapman & Hall. 1993. ISBN 0-412-54810-0.

This attractive, slim, yellow volume has been written by a pathologist and a surgeon. It attempts to pull together the underlying pathological processes and subsequent clinical presentation and treatment of diseases of the appendix. I thoroughly enjoyed reading about all aspects of the appendix, its anatomy and pathology, and the management of its diseases. The diagrams are clear and the photomicrographs are excellent.

I was slightly surprised that there was virtually no mention of the epidemiology of appendicitis, in particular, recent work suggesting an infectious origin. However, the book is a goldmine of information and makes fascinating reading. I would thoroughly recommend it to any pathologist with an interest in gastrointestinal pathology, gastroenterologist, or surgeon with an interest in gastrointestinal diseases.

CLAIR DU BOULAY

Diagnostic Surgical Pathology. 2nd edn. Vols 1 and 2. (Pp 2474; $409.) Raven Press. 1993. ISBN 0–7817–0043–4.

Large text books, often in more than one volume, which try and include all there is to know about surgical pathology, are different things to different people. To the medical undergraduate they may represent an Everest; to the junior trainee in histopathology they may represent a supermarket; to the pre-examination trainee the sum of all knowledge which they assume they are expected to know; and to the consultant histopathologist a reference book. In the Preface to the first edition this set is aimed at "a surgical pathologist working solo". Hopefully this is a rapidly diminishing species. The second edition has in its Preface, "our authors have worked with enlightened care, selectively reviewing new information and preparing it in a manner that we feel is appropriate for the practising surgical pathologist".

As a practising surgical pathologist I have used these books as desk-top reference books and I have found them excellent. The writing is clear and unambiguous. The index is reasonable but does not include some rare conditions, such as vasitis nodosa, and is irritating because, for example, there are only two entries under bladder (and neither of these says "see urinary tract") and all the pathology of the bladder is indexed under urinary tract.

The pictures, which are a good mix of colour and black and white, are appropriate, of reasonable size and clear definition. In only occasional chapters is the magnification given but, for the most part, this should not be a problem to the practising histopathologist.

The references are comprehensive and reasonably up to date but do not seem to be very selective and look as if they have come straight off a computer; I would have preferred some identification of what the authors consider key articles.

I think this set will be of great value to consultant pathologists and those who are nearing the end of their training, but if used for exams, could well be overwhelming.

DH MELCHER

Some new titles

The receipt of books is acknowledged, and this listing must be regarded as sufficient return for the courtesy of the sender. Books that appear to be of particular interest will be reviewed as space permits.

The Foot in Diabetes. 2nd edn. Ed AJM Boulton, H Connor, PR Cavanagh. (Pp 256; £29.95.) John Wiley & Sons. 1994. ISBN 0-471-94259-6.

Notices

Histopathology of the bone marrow

St Mary's Hospital Medical School
Wednesday 7 September 1994

The course is for consultant haematologists, consultant histopathologists, and advanced trainees in haematology and histopathology.

Those wishing to participate should apply in writing, enclosing a cheque for the appropriate amount to:

Dr B J Bain, Department of Haematology, St Mary's Hospital Medical School, Norfolk Place, London W2 1PG

Cheques to be made payable to:
St Mary's Hospital Medical School,
Account AC HA 83 20
Cost: £75

1994 Penrose Cancer Conference on soft tissue sarcomas

September 23–24 1994
Broadmoor Hotel
Colorado Springs, Colorado

Guest discussants will include Drs Richard Kempson, Stanford University; Sharon Weiss, University of Michigan; and Maxine Jochelson and Charles Forscher, Cedars-Sinai Comprehensive Cancer Center. These highly acclaimed conferences focus primarily on the diagnosis of neoplasms, and provide a unique alternative to other treatment oriented programmes in the field. Cases submitted by physicians around the country will be used to illustrate difficult diagnostic issues. Prior to the meeting, attendees will receive a clinical record, photographs of imaging, and microscopic slides for those cases to be discussed. Objectives of the conference include the review of soft tissue sarcoma cases with emphasis on pathological and radiological diagnosis. AMA Accreditation Category 1, 9 hours.

Registration fees for physicians: $275 before August 15, $300 after. Registration fees are waived for residents in training who provide appropriate documentation of their status and register before August 15; $50 registration fee thereafter.

For further information, please contact:
Leslie Bent, R.N.
Penrose Cancer Center
P.O. Box 7021
Colorado Springs, CO 80933
7 (719) 577-2510 or 7 (719) 630-5271

Correction

G K Bannerjee's name was inadvertently omitted from the correspondence on benign familial hyperphosphatasaemia *J Clin Pathol* 1993;46:187–8.